AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A conductive plastic resistance element for a variable resistor ~~having~~of the type having a wiper for movably contacting said resistance element to vary the resistance of the variable resistor, the resistance element comprising:

a substrate;

a carbon and plastic resistive matrix disposed as a layer on said substrate and having a layer thickness, said carbon being a current carrying phase of the matrix wherein a higher percentage of carbon relative to the percentage of plastic in the carbon and plastic resistive matrix producing a lower resistance and a lower percentage of carbon relative to the percentage of plastic in the carbon and plastic resistive matrix producing a higher resistance; and

particles of conductive material no larger than about 6 microns formed in *situ* and embedded ~~therein~~ in a surface of said layer of resistive matrix and exposed and projecting therefrom for sliding contact with the wiper contact of the variable resistor, said particles of conductive material forming a conductive phase at the surface operative to reduce a contact resistance between said resistive element and said wiper but not being present in sufficient amount within a volume of said layer to significantly alter resistive properties of said resistive matrix, said particles of conductive material ~~and~~ projecting therefrom for sliding contact with the wiper contact of the variable resistor but having a minor effect on the wear properties of the resistive element.

2. (Currently Amended) The resistance element of Claim 1 wherein the conductive material is deagglomerated smooth generally round metallic silver powder that promotes good electrical contact with said wiper and does not tend to join together to form conductive metallic silver paths at said surface or through portions of the carbon-plastic resistive matrix and thereby does not tend to lower the resistance of the carbon-plastic resistive matrix.

3. (Currently Amended) The resistance element of Claim 1 wherein the conductive material is silver and palladium deagglomerated spherical metallic powder containing about 70 percent silver and 30 percent palladium that promotes good electrical contact with said wiper and does not tend to join together to form conductive metallic paths at said surface or through portions of the carbon-plastic resistive matrix and thereby does not tend to lower the resistance of the carbon-plastic resistive matrix.

4. (Currently Amended) The resistance element of Claim 1 wherein the conductive material is selected from the group consisting of silver, palladium, gold, platinum, copper, highly conductive carbon, and combinations thereof; and said conductive material is in the form of a deagglomerated spherical metallic powder that promotes good electrical contact with said wiper and does not tend to join together to form conductive metallic paths at said surface or through portions of the carbon-plastic resistive matrix and thereby does not tend to lower the resistance of the carbon-plastic resistive matrix.

5. (Previously Presented) The resistance element of Claim 1 wherein the conductive material is present in an amount equal to about 10 to 20 percent by weight of the resistive element.

6. (Previously Presented) The resistance element of Claim 1 wherein the conductive material is present in an amount equal to about 2 to 50 percent by weight of the resistive element.

7. (Currently Amended) A resistance element for use in a potentiometric device of the type having a wiper contact which movably engages the resistance element to vary the resistance of the potentiometer device, comprising:

a substrate;

a carbon and /plastic resistive matrix disposed as a layer on said substrate and having a layer thickness, said carbon being a conductive current carrying phase of the matrix wherein a higher percentage of carbon relative to the percentage of plastic in the

carbon and plastic resistive matrix producing a lower resistance and a lower percentage of carbon relative to the percentage of plastic in the carbon and plastic resistive matrix producing a higher resistance, ~~with~~ particles of the conductive phases being embedded in a surface of said layer of resistive matrix and exposed and projecting therefrom for sliding contact with the wiper contact ~~for~~ reducing variations in resistance between the wiper contact and the resistance element over the life of the device but not being present in sufficient amount within a volume of said layer to significantly alter resistive properties of said resistive matrix.

8. (Previously Presented) The resistance element of Claim 7 wherein the conductive phases consist of silver.

9. (Previously Presented) The resistance element of Claim 7 wherein the conductive phases consist of silver and palladium.

10. (Previously Presented) The resistance element of Claim 7 wherein the conductive phases are selected from the group consisting of silver, palladium, gold, platinum, copper, highly conductive carbon, and combinations thereof.

11. (Previously Presented) The resistance element of Claim 7 wherein the conductive phases are present in an amount equal to about 10 to 20 percent by weight of the resistive element.

12. (Previously Presented) The resistance element of Claim 7 wherein the conductive phases are present in an amount equal to about 2 to 50 percent by weight of the resistive element.

13. (Currently Amended) A method of manufacturing a conductive resistance element for use in a potentiometric device of the type having a wiper contact, comprising the steps of:

processing carbon powder, resin, solvent and conductive phases to form a paste, applying the paste to a substrate, and curing the paste in *situ* to drive off the solvent and form a film, with the conductive phases rising to the surface of the film and becoming embedded therein.

14. (Previously Presented) The method of Claim 13 wherein the paste is cured at a temperature on the order of 200°C.

15. (Previously Presented) The method of Claim 13 wherein the paste is screen printed onto the substrate.

16. (Previously Presented) The method of Claim 13 wherein the carbon powder, resin, solvent and conductive phases are processed in a high shear mixer.

17. (New) The method of Claim 13 wherein:

the film is disposed as a layer on said substrate and has a layer thickness, said carbon being a current carrying phase of the film wherein a higher percentage of carbon relative to the percentage of plastic in the carbon and plastic resistive film producing a lower resistance and a lower percentage of carbon relative to the percentage of plastic in the carbon and plastic resistive film producing a higher resistance; and

the particles of conductive material are embedded in the surface of said film and exposed and projecting there from for sliding contact with the wiper contact, said particles of conductive material forming a conductive phase at the surface operative to reduce a contact resistance between said resistive element and said wiper contact but not being present in sufficient amount within a volume of said layer to significantly alter resistive properties of said conductive resistive element.

18. (New) The method of Claim 13, wherein the particles of conductive material are no larger than about 6 microns.

19. (New) The method of Claim 13, wherein the conductive material is deagglomerated smooth generally round metallic silver powder that promotes good electrical contact with said wiper and does not tend to join together to form conductive metallic silver paths at said surface or through portions of the carbon-plastic resistive matrix and thereby does not tend to lower the resistance of the carbon-plastic resistive matrix.

20. (New) The method of Claim 13, wherein the conductive material is silver and palladium deagglomerated spherical metallic powder containing about 70 percent silver and 30 percent palladium that promotes good electrical contact with said wiper and does not tend to join together to form conductive metallic paths at said surface or through portions of the carbon-plastic resistive matrix and thereby does not tend to lower the resistance of the carbon-plastic resistive matrix.

21. (New) The method of Claim 13, wherein the conductive phases consist of silver.

22. (New) The method of Claim 13, wherein the conductive phases consist of silver and palladium.

23. (New) The method of Claim 13, wherein the conductive phases are selected from the group consisting of silver, palladium, gold, platinum, copper, highly conductive carbon, and combinations thereof.

24. (New) The method of Claim 13, wherein the conductive phases are present in an amount equal to about 10 to 20 percent by weight of the resistive element.

25. (New) The method of Claim 13, wherein the conductive phases are present in an amount equal to about 2 to 50 percent by weight of the resistive element.